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# Historical global fishing patterns mapped in new study

Researchers have mapped the scale and patterns of change in global marine fishing for the last century and a half.

Institute for Marine and Antarctic Studies (IMAS) Professor of Fisheries and Ecological Modelling Reg Watson led the global study, *Mapping nearly a century and a half of global marine fishing: 1869-2015.*

Professor Watson used historical data dating back to 1869 and new satellite technologies to map and visualise global fishing patterns.

“Compared to the previous blurry maps, the new techniques have provided a sharp image of the fishing patterns providing valuable wild-caught seafoods,” Professor Watson said.

The study led to a new dataset, which not only separates industrial fishing post-WWII from other fishing, but documents by country and associated fishing gear, the entire catch, including estimates of illegal, unreported and discarded catch.

“Fishing has coevolved with humans and has been vital to our survival since prehistoric times,” Professor Watson said.

“Globally, we have a lot of information on marine fishing from the 1950s and beyond, but no one has gone back and mapped prior to this to get an overall picture.

“It’s invaluable to get an all-inclusive overview and see how things have changed over time.”

Key findings from the study include:

- The intensification of fishing undertaken, especially in the Asian region. Prior to the 1900s, Canada, USA and Japan were key fishing countries. Since 1950, Japan, Russia and Peru have been leading. Since 2000, China has continued to increase its fishing fleets and landings (fish caught).

- The study found that more of the fishing pressure has moved off-shore progressively over time, particularly in tropical areas.

- Before 1900 most fish landings (caught) were bottom-dwelling fish. Following industrial expansion post-WWII, fisheries landings increased to include greater quantities of smaller fish in the water column. In recent years, there has been a relative expansion of valued landings of tuna, shrimps and squid, reflecting the ability of fleets to roam widely, work at night and use energy-intensive methods of fishing with support of modern technologies.

- There has been an increase in bottom trawling, which can impact marine habitats and cause damage.

“Much can be learnt from looking at historical patterns of fishing, and they can help inform decisions vital to maintaining the marine resources and their environments that mankind depends on,” Professor Watson said.

The research paper can be viewed at
www.sciencedirect.com/science/article/pii/S0308597X18300605

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